User Manual

POSpark 5700 Series

Version 1.2

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General Information

ABOUT THIS MANUAL

The purpose of this user's manual is to provide general information on TYSSO POSpark Series POS terminal and to show the users how to configure the hardware-related configurations. The information in this manual is subject to change without notice due to rapid improvement on IT technology. The users can get the most up to date information from our web sites: http://www.fametech.com.tw

DISCLAIMER

This manual has been examined for accuracy. While precaution has been taken in the preparation of this manual, neither the manufacturer takes no liability for errors or omissions nor assume any responsibility for damage(s) incurred directly or indirectly from errors, omissions, or discrepancies of this manual. IN NO EVENT WILL THE VENDOR BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THIS PRODUCT OR DOCUMENTATION, EVEN IF THE POSSIBILITY OF SUCH DAMAGES HAS BEEN ADVISED. IN PARTICULAR, THE VENDOR SHALL NOT HAVE LIABILITY FOR ANY HARDWARE, SOFTWARE, OR DATA STORED OR USED WITH THE PRODUCT, INCLUDING THE COSTS OF REPAIRING, REPLACING, OR RECOVERING SUCH HARDWARE, SOFTWARE OR DATA.

WARNING

The terminal has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interface in a residential installation. This equipment can generate and radiate radio frequency energy and, if not installed and used according to the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interface will not occur under particular installation. If this equipment does cause harmful interference to radio or television reception, which is found by turning the equipment off and on, the user is encouraged to try to correct the interface by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the distance between the equipment or device

- Connect the equipment to an outlet other than the receiver's
- Consult a dealer or an experienced radio/TV technician for assistance

CAUTION

The system is provided with a battery-powered Real-Time Clock circuit. There is a danger of exposing and personal injury if the battery is incorrectly replaced or mistreated. Do not attempt to disassemble the battery, immerse it in the water or expose it to fire.

WARRANTY LIMITS

If the POSpark series machine is disassembled by any person other than the authorized technicians, the warranty will be terminated. The users should consult his/her dealer for any technical problems. Warranty does not cover any damage caused by improper use.

TRADE MARKS AND SERVICE MARKS

TYSSO is a registered trademark of FAMETECH INC.

Other brand and product names are trademarks and registered trademarks and service marks of their respective owners.

IMPORTANT SAFETY INFORMATION

- Read all these instructions carefully.
- Use only parts, especially power adapter, recommended by the manufacturer; unapproved parts may be hazardous.
- Before plugging the power cord into the AC inlet of the power supply unit, make sure the voltage (either 110V or 220V) is properly applied to the power switch. Improper voltage will cause damage to the power supply unit.
- Power off the system and remove the power adapter while cleaning the system.
- Before powering on the system, check if all the peripherals are firmly installed.
- Do not use the system near water, such as a bathtub, a washbowl, a kitchen sink, a laundry tub, and a swimming pool. Keep the system away from direct sunlight, a heating or a radiator.
- Do not place the system on an unstable cart, stand or table. If the machine falls, it may injure a person or cause serious damage to the appliance.
- The system is equipped with a three-wire grounded plug with a third (grounding) pin. This is a safety feature. If your outlet does not accommodate the three-wire plug, have an electrician install a correct outlet, or use an adapter to ground the appliance safely. Do not leave out the safety purpose of the grounded plug.
- Do not allow anything to rest on the power cord. Do not locate the system where people may walk on the cord.
- Do not make the power outlet and extension cords overload. Overload can result in fire or electric shock.
- Do not push any object into the computer cabinet. Dangerous voltage points may be touched and the parts may be shorted out resulting in fire or electric shock.
- Do not attempt to service the system on your own. Opening or removing cover can expose you to dangerous voltage or other hazards.
- Power off the system before installing or removing non-PNP (plug and play) devices.
- If any of the following situations occurs, unplug the systems from the power outlet immediately and consult with a qualified service person:
  1. The power cord or plug is damaged or frayed.
  2. Liquid is spilled into the system.
  3. The system is dropped or the cabinet is damaged.
- When the system is not in use, cover the system and store it with care.

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1. Introduction

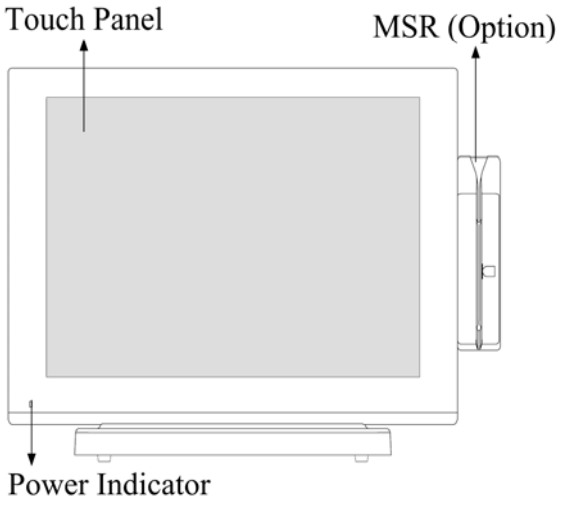
1.1 Unpacking

The contents may vary with different options. If there's any physical damage or missing parts, please contact your supplier immediately. Please keep all packing materials in case you need to ship back the device for service.

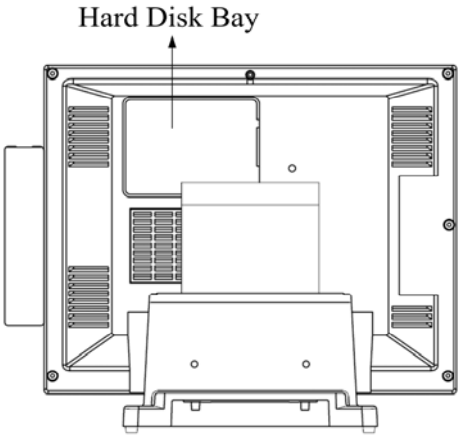
- POSpark main system
  - HDD (2.5", pre-installed) / Compact Flash (CF, pre-installed) / Disk on Module (DOM, pre-installed)
  - SODIMM DDR266/333, 256MB/512MB/1GB (Pre-installed)
  - CPU Celeron 1.0GHz (Mounted)
- Magnetic stripe card reader (Option)
- Customer display (Option)
- WiFi module (Option, pre-installed)
- Power adapter
- AC power cord
- Support CD

1.2 System Overview

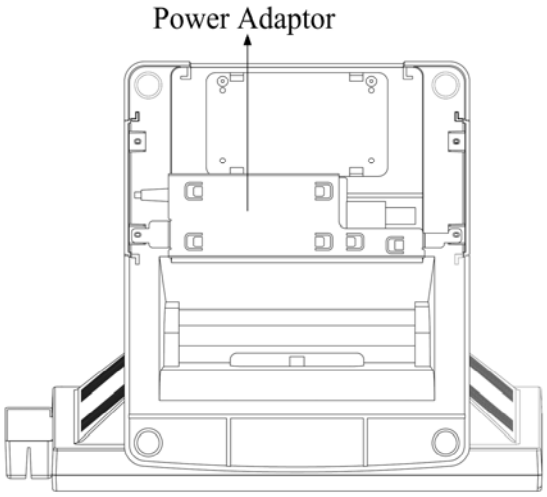
- **Front View**



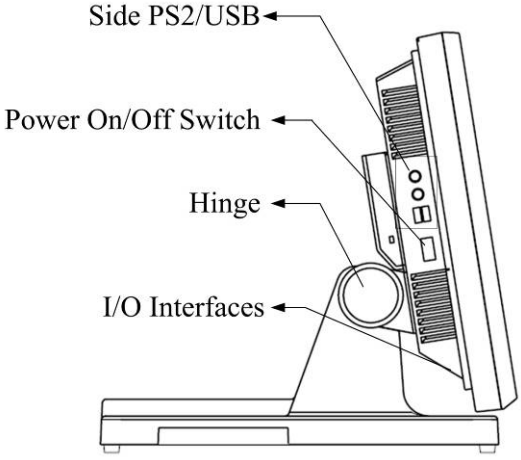
- **Rear View**



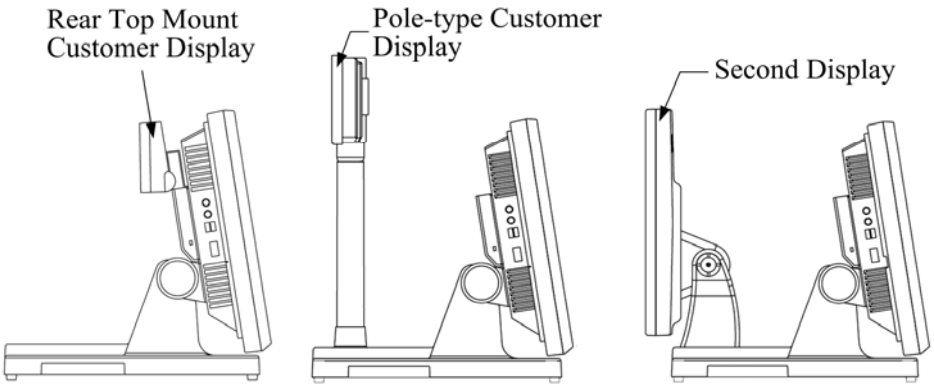
- **Bottom View**



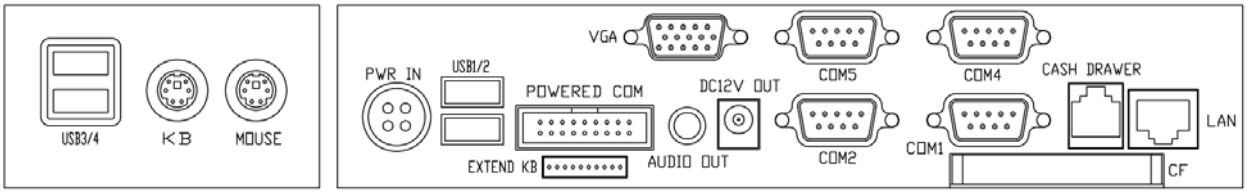
- **Side View**



Options:

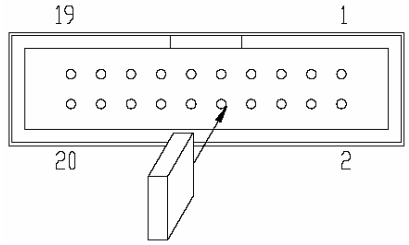

Rear Top Mount
Customer Display
Pole-type Customer
Display
Second Display

1.3 I/O Ports



Port	Description
USB	Connect devices with USB connectors. There are 2 internal USB ports reserved and one external port is for connecting touch panel.
Mouse	PS/2 Mouse Connector
KB	PS/2 Keyboard Connector
PWR IN	A 4 din rounded-power-jack for connecting an AC to DC +12V power adapter.
POWERED COM	COM 1/2/4 can provide RI, +5V, or +12V on pin 9 by switching the power COM jumpers. Refer to the PWR COM Jumper Setting figure below.
Extend KB	8-pin pitch 2.0 for keyboard.
AUDIO OUT	Earphone or speaker connector with 2 internal speakers.
DC12V OUT	12VDC jack for customer display (VFD).
Serial	4 x DB9 RS-232. COM 1/2/4: pin 9 RI/5V/12V selected by jumper.
CASH DRAWER	RJ-11 connector with DC +12V.
LAN	RJ-45 connector with link/ack integrates speed LED and supports wake-from-LAN function.
CF	A slot for inserting CF card
VGA	A 15 pin D-type connector serves to transmit VGA data to the monitor.

POWER COM Jumper Setting



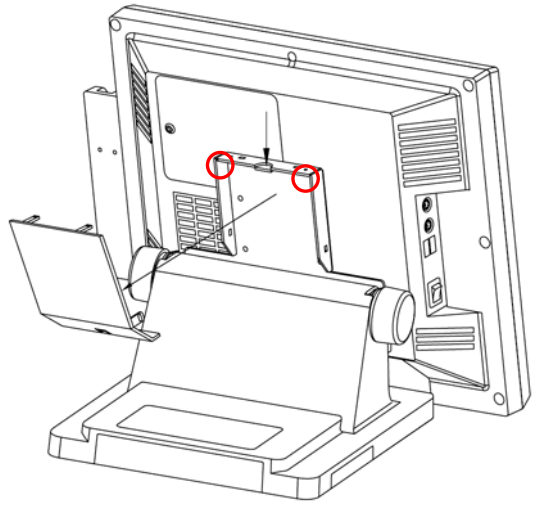
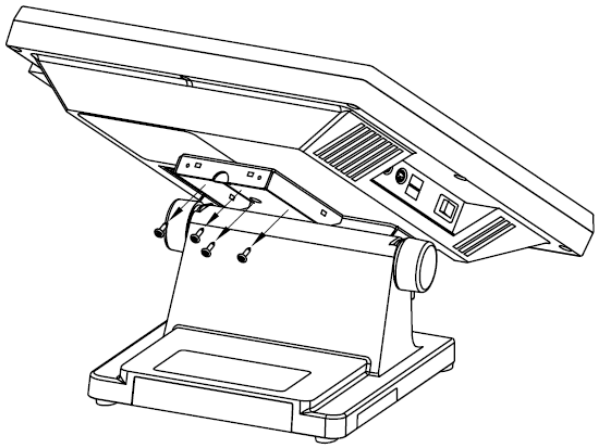
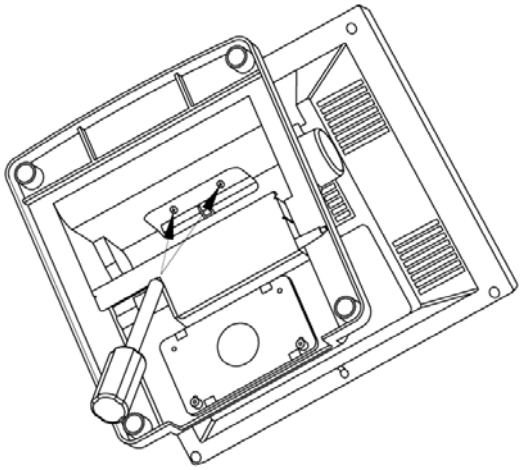
COM / Voltage	1	2	4
RI (Default)	Pin 5-6	Pin 11-12	Pin 17-18
5 V	Pin 3-4	Pin 9-10	Pin 15-16
12 V	Pin 1-2	Pin 7-8	Pin 13-14

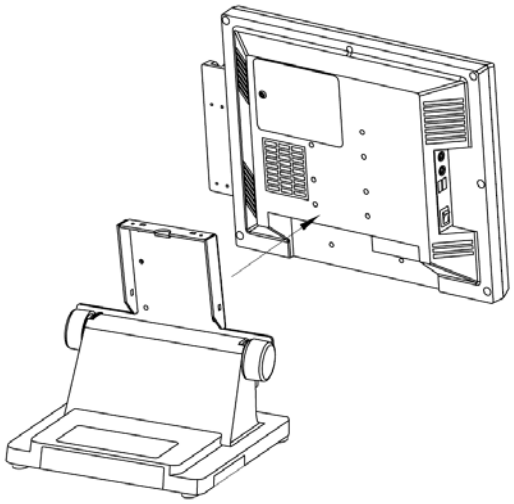
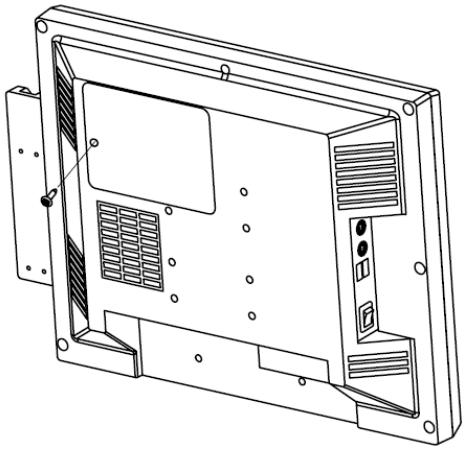
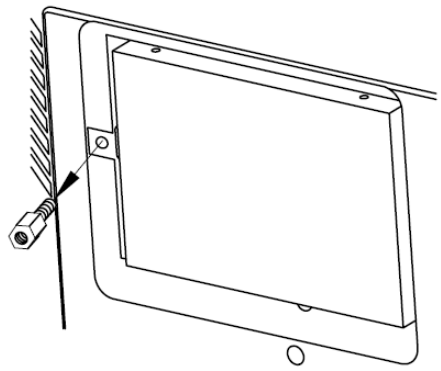
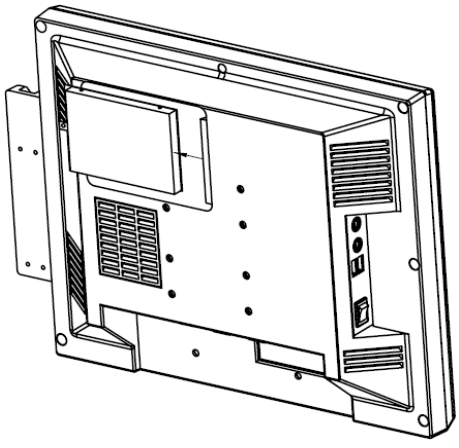
1.4 Specifications

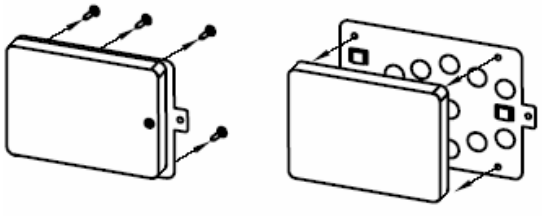
Model	POS-5717	POS-5715	POS-5712
Main Board			
CPU	Intel Celeron M 1.0GHz BGA Type		
Core Logic	Intel 852GM + ICH4		
System Memory	200-pin SODIMM, DDR266/333, 256MB/512MB/1GB		
OS Support	Win2000, NT, Win XP Pro, WinCE, WEPOS		
Display			
TFT LCD	17”	15”	12.1”
Brightness	300 nits	250 nits	180 or 400 nits
Resolution	1280 x 1024 Pixel	1024 x 768 Pixel	
Touch Screen	5 Wire Resistive Type		
Tilting Angle	15 ~ 80 Degrees		
Storage Device			
HDD	1 x 2.5” EIDE or SATA Types		
Compact Flash	1 x Slot Type II, Non-removable		
Disk On Module	DOM 44P 180 degree vertical on IDE Slot		
I/O Ports			
Serial	4 x RS-232 DB-9. COM1/2/4: Pin 9 RI/5/12V Selected by Jumper		
USB	3 x USB2.0 External, 1 x USB2.0 External for Touch Panel, 2 x USB2.0 Internal Reserved		
PS/2 Mouse	1 x 6-pin Mini DIN		
PS/2 Key Board	1 x 6-pin Mini DIN		
Extend KB	1 x 8-pin Pitch 2.0		
LAN	1 x RJ45, 10/100 Base-T		
VGA	1 x DB-15, Female		
DC Out	1 x 12VDC Jack for Customer Display		
Cash Drawer	1 x RJ11 , 12VDC		
Audio Out	1 x Audio Jack with Internal Speaker 2W x 2		
Others			
Power Input	Power Adapter 12VDC 90W, 4-pin Connector with Lock		
Color	Black or Silver Optioned for Front Panel Cover		
Compliance	FCC / CE / WEEE / RoHS		
Weight	7 Kg	6.5 Kg	6 Kg
Dimension (W x D x H :	415 x 320 x 410	367 x 320 x 360	345 x 320 x 340
Operating Temperature	5 ℃ ~ 40 ℃		
Storage Temperature	-20°C ~ 60°C		
Storage Humidity	20% - 80% RH, Non-condensing		
Optional Accessories			
Customer Display	VFD / LCD, RS232 I/F		
MSR	3 Tracks, KB or RS232 I/F		
2nd Display	10.4” / 12.1” / 15” LCD VGA I/F		

2. Components & Peripherals Installation

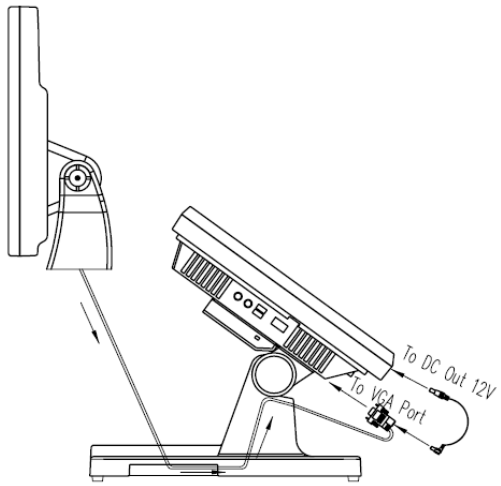
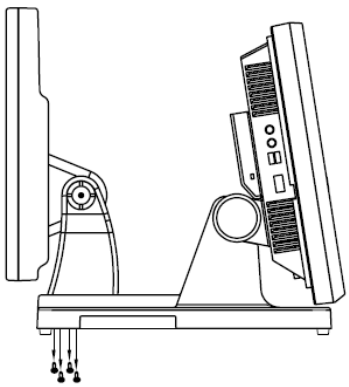
2.1 Replace Hard Disk

	a. Lift the cover from the upper side edges as marked by the circles and push it down to remove it.
	b. Lossen the screw x 4 on the VESA bracket.
	c. Turn over the system to loosen the screw x 2 on the back of the panel.

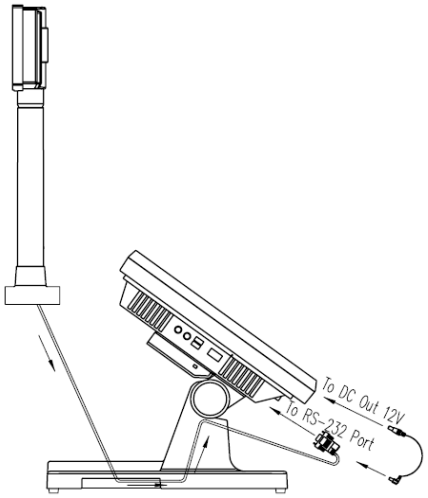
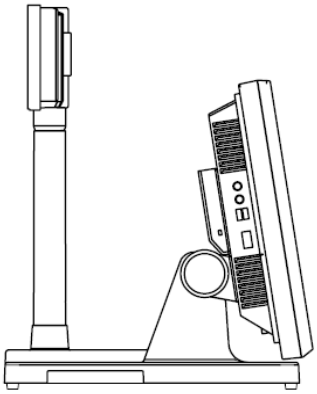
	d. Remove the panel from the VESA bracket.
	e. Loosen the screw on the cover of the hard disk bay to remove the cover.
	f. Loosen the spacer.
	g. Hold the hard disk and take it out in the direction. Then unplug it from the connector.

	h. Loosen the 4 screws to remove the hard disk from the bracket. Then install the new hard disk following the above steps with the order reversed.

2.2 Install Second Display

	a. Hold the second display and turn the system over carefully. Pass the cord through the holes in the directions of the arrows. Plug the cable into the VGA port and connect the extension power cable.
	b. Tighten the bundled screws specified for the stand of the second display to fix it to place.

2.3 Install Pole-type Customer Display

	a. Pass the cord of the customer display through the holes in the directions of the arrows. Plug the cable to a free COM port and connect the extension power cable.
	b. Press the stand of the customer display into place.

Note

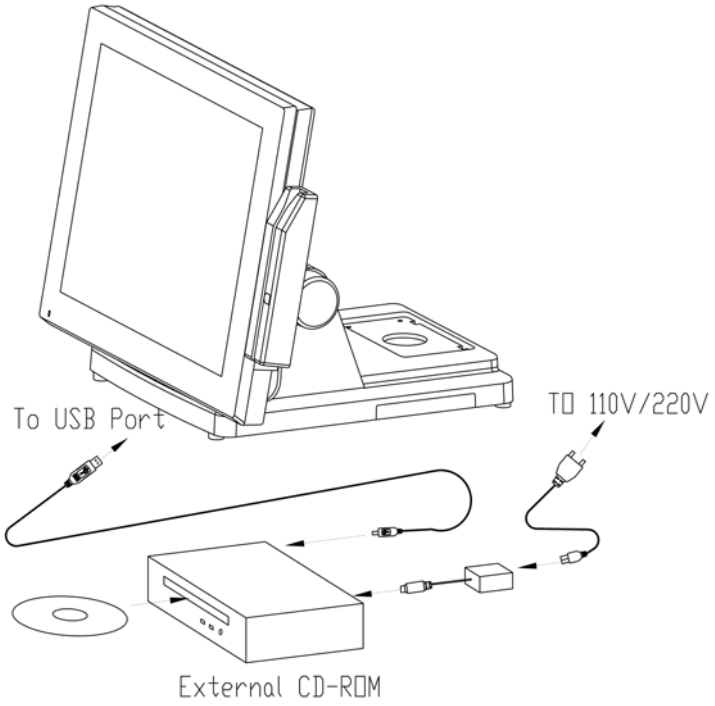
- The rear top mount customer display is pre-installed in factory.
- If the 9th pin of the RS-232 connector is power in, the device can be powered directly via the COM port by jumper setting (see “POWER COM Jumper Setting” in Section 1.3 I/O Ports and “JP10: COM1, COM2, COM4 port RI and voltage selection” in Section 6.1 Jumper Settings). Thus the extension power cable is not necessary.

3. Operating System

The POSpark main board is compatible with Windows 95/98/2000/XP and Red Hat Linux 9.0. If the drivers are required, find the necessary files in the support CD. The storage media can be HDD, Compact Flash (CF), or Disk on Module (DOM) depending on different options.

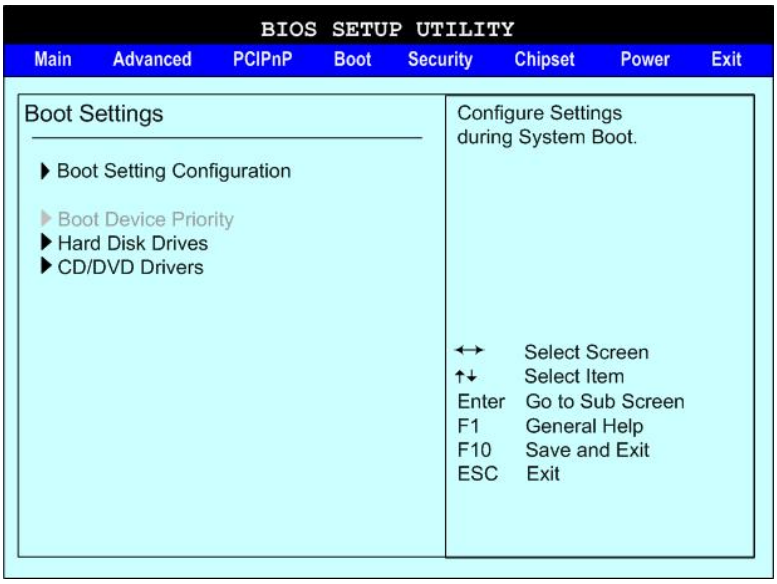
3.1 Install OS by USB CD-ROM

a. Plug the AC power cord of the power adapter to the PWR IN port. Connect an external CD-ROM to the POS system as the figure shown below and insert the installation CD for the Operating System.

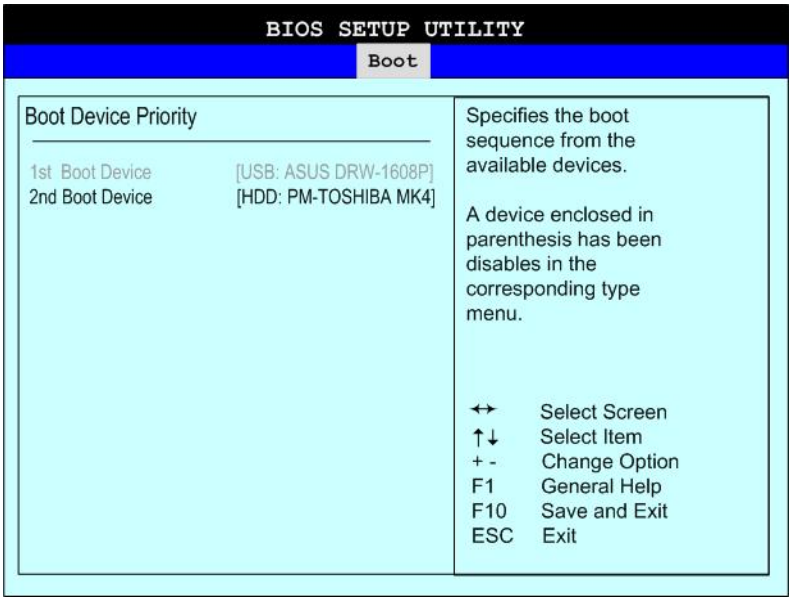


b. Press the <Delete> key after powering on the system. The system will enter the BIOS Setup Utility.

c. Select “Boot” with the → key. Select “Boot Device Priority” with the ↓ key and press the <Enter> key.



d. Select "1st Boot Device" and press the → key. Press the ↓ key to select "USB: External CD-ROM." Press the <F10> key to save and exit the setting.

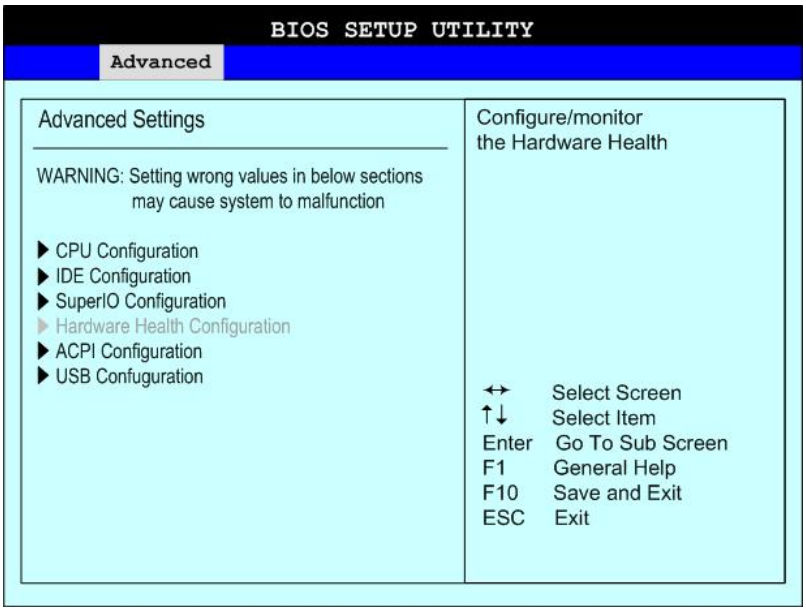

BIOS SETUP UTILITY
Boot
Boot Device Priority
1st Boot Device [USB: ASUS DRW-1608P]
2nd Boot Device [HDD: PM-TOSHIBA MK4]
Specifies the boot sequence from the available devices.
A device enclosed in parenthesis has been disables in the corresponding type menu.
↔ Select Screen
↑↓ Select Item
+ - Change Option
F1 General Help
F10 Save and Exit
ESC Exit

e. After the system reboots, it will start to install the operating system from the CD.

3.2 Adjust CPU Fan Mode and Brightness

a. Press the <Delete> key after powering on the system to enter the BIOS Setup Utility.

b. Select “Advanced.” Select “Harware Health Configuration” and press the <Enter> key to go to the sub screen.

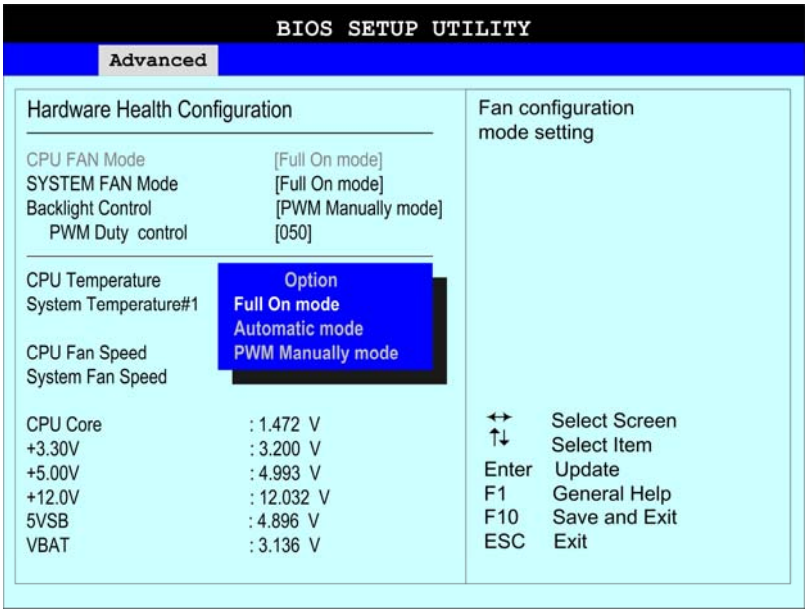


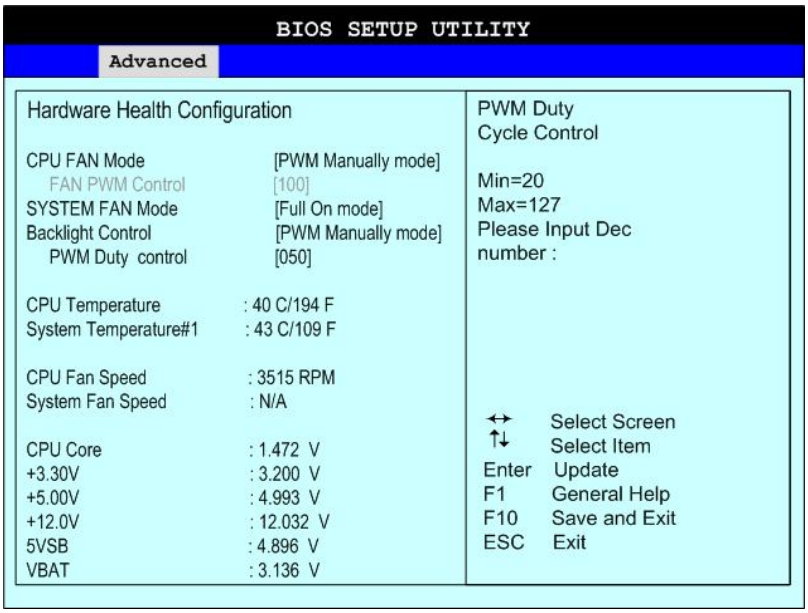
c. Select “CPU Fan Mode” and press the <Enter> key. There are 3 modes for options:

Full On mode makes the CPU fan run at its full speed.

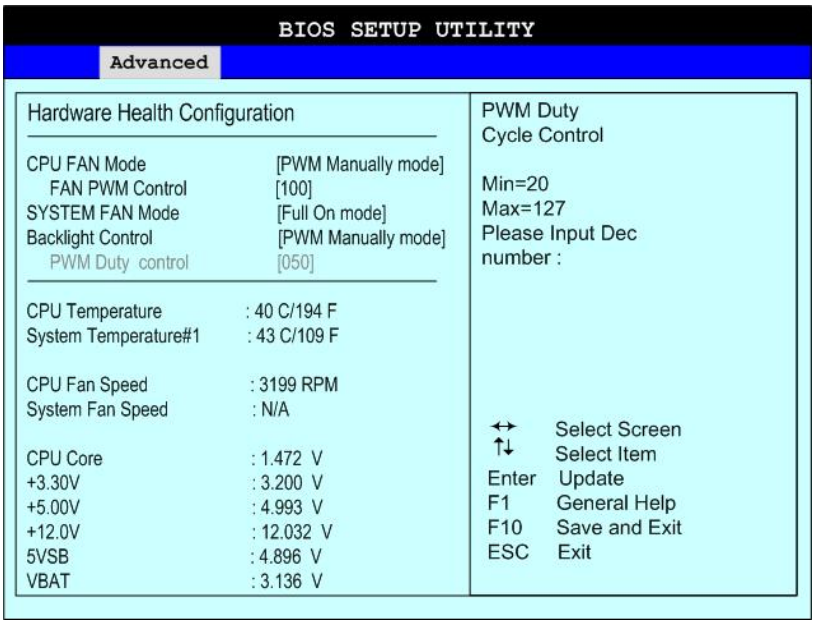
Automatic mode is not available.

PWN Manually mode enables the users to adjust the CPU fan by entering a number between 20~127. The higher the value, the higher the speed will be.





d. Select “PWM Duty control.” Adjust the brightness by entering a number ranges from Min 20 to Max 127. The higher the value, the brighter the screen will be.



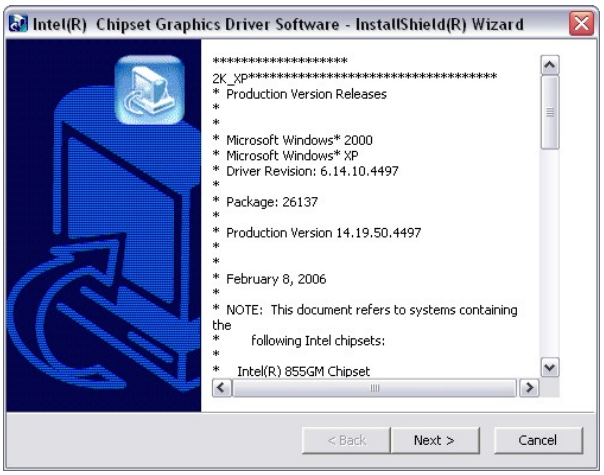
e. After configuring the setting, press the <F10> key to save and exit the setting. The system will reboot automatically.

4. Drivers Installation

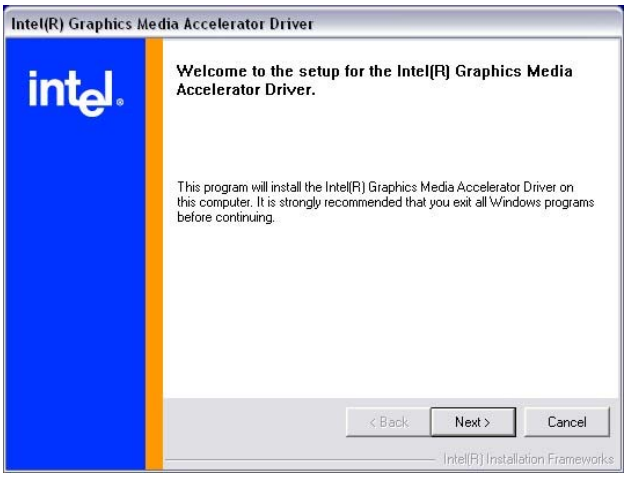
4.1 Install Chipset Driver

a. Double click the folder “MB” “852gm” and then the file “win2k_xp141950.exe” to start the installation.

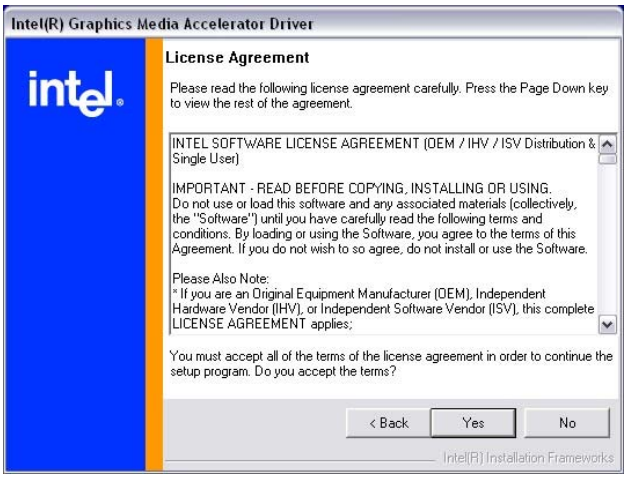
b. Click “Next” as the window pop up.



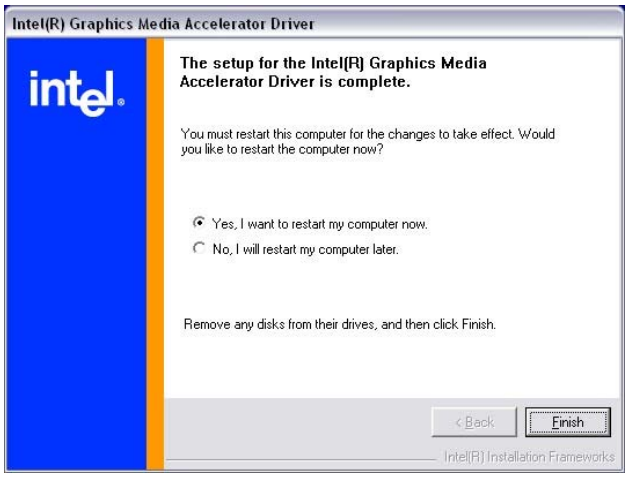
c. Click “Next”.


Intel(R) Graphics Media Accelerator Driver
intel
Welcome to the setup for the Intel(R) Graphics Media Accelerator Driver.
This program will install the Intel(R) Graphics Media Accelerator Driver on this computer. It is strongly recommended that you exit all Windows programs before continuing.
< Back
Next >
Cancel
Intel(R) Installation Frameworks

d. Click “Yes” on the License Agreement window to accept the terms.


Intel(R) Graphics Media Accelerator Driver
License Agreement
Please read the following license agreement carefully. Press the Page Down key to view the rest of the agreement.
INTEL SOFTWARE LICENSE AGREEMENT (OEM / IHV / ISV Distribution & Single User)
IMPORTANT - READ BEFORE COPYING, INSTALLING OR USING.
Do not use or load this software and any associated materials (collectively, the "Software") until you have carefully read the following terms and conditions. By loading or using the Software, you agree to the terms of this Agreement. If you do not wish to so agree, do not install or use the Software.
Please Also Note:
* If you are an Original Equipment Manufacturer (OEM), Independent Hardware Vendor (IHV), or Independent Software Vendor (ISV), this complete LICENSE AGREEMENT applies;
You must accept all of the terms of the license agreement in order to continue the setup program. Do you accept the terms?
< Back
Yes
No
Intel(R) Installation Frameworks

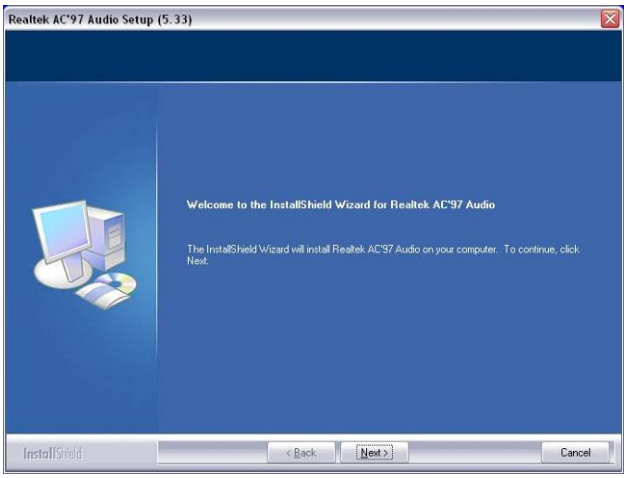
e. Click “Finish” and restart the system.


Intel(R) Graphics Media Accelerator Driver
The setup for the Intel(R) Graphics Media Accelerator Driver is complete.
You must restart this computer for the changes to take effect. Would you like to restart the computer now?
Yes, I want to restart my computer now.
No, I will restart my computer later.
Remove any disks from their drives, and then click Finish.
< Back
Finish
Intel(R) Installation Frameworks

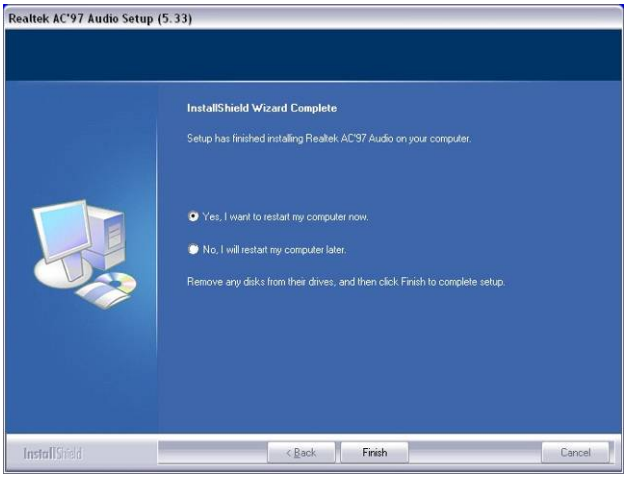
4.2 Install Audio Driver

a. Double click the folder “MB” “audio” and the file “WDM_A398.exe” to start the installation.

b. Click “Next” on the Audio Setup window.


Realtek AC'97 Audio Setup (5.33)
Welcome to the InstallShield Wizard for Realtek AC'97 Audio
The InstallShield Wizard will install Realtek AC'97 Audio on your computer. To continue, click Next.
InstallShield
< Back
Next >
Cancel

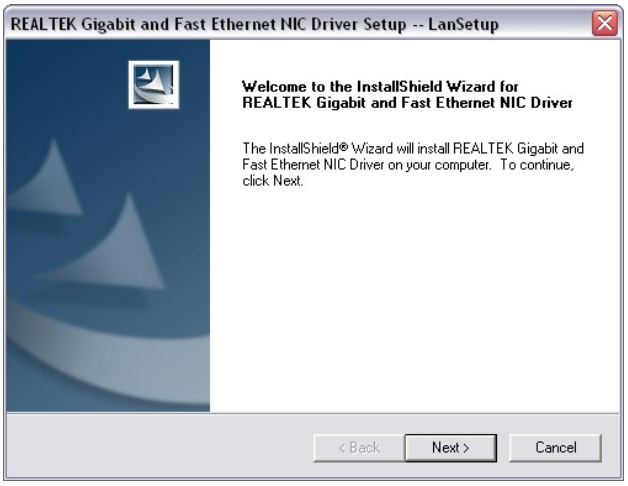
c. Click “Finish” and restart the system.


Realtek AC'97 Audio Setup (5.33)
InstallShield Wizard Complete
Setup has finished installing Realtek AC'97 Audio on your computer.
Yes, I want to restart my computer now.
No, I will restart my computer later.
Remove any disks from their drives, and then click Finish to complete setup.
InstallShield
< Back
Finish
Cancel

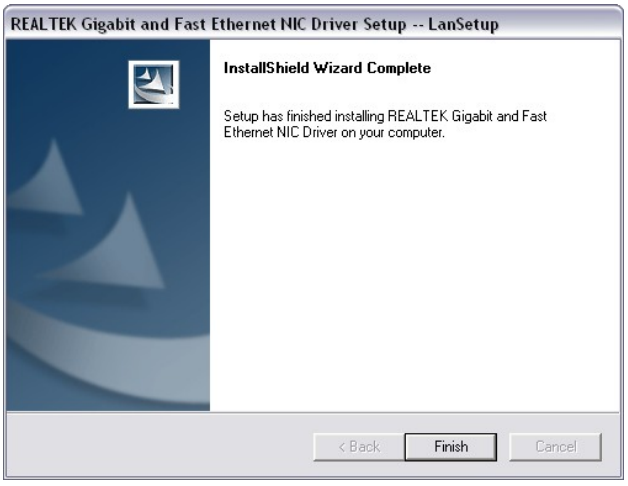
4.3 Install LAN Driver

a. Double click the folder “MB” “LanSetup” and then the file “Setup.exe” to start the installation.

b. Click “Next” on the welcome window.

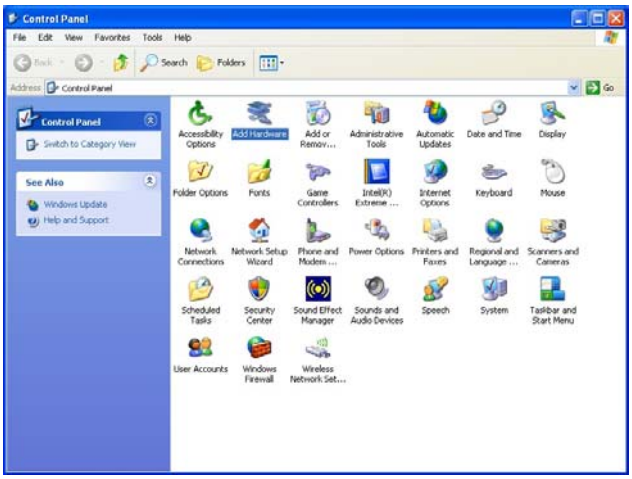

REALTEK Gigabit and Fast Ethernet NIC Driver Setup -- LanSetup
Welcome to the InstallShield Wizard for REALTEK Gigabit and Fast Ethernet NIC Driver
The InstallShield® Wizard will install REALTEK Gigabit and Fast Ethernet NIC Driver on your computer. To continue, click Next.
< Back
Next >
Cancel

c. Click “Finish” to finish the installation.


REALTEK Gigabit and Fast Ethernet NIC Driver Setup -- LanSetup
InstallShield Wizard Complete
Setup has finished installing REALTEK Gigabit and Fast Ethernet NIC Driver on your computer.
< Back
Finish
Cancel

4.4 Install Wi-Fi

a. Execute All Programs >> Control Panel >> Add Hardware.



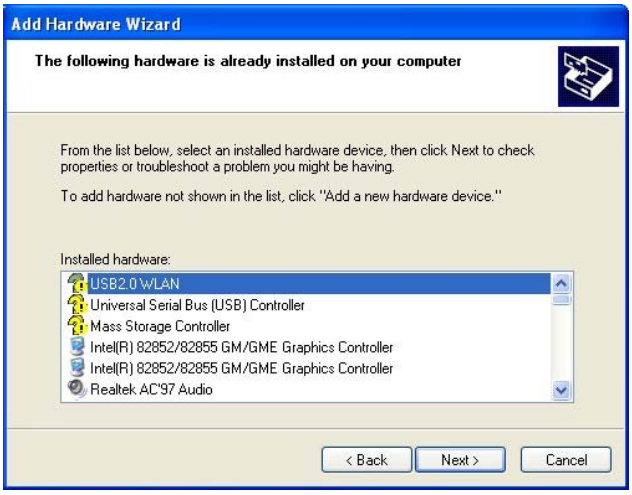
b. Click “Next” on the welcome window.

Add Hardware Wizard
Welcome to the Add Hardware Wizard
This wizard helps you:
• Install software to support the hardware you add to your computer.
• Troubleshoot problems you may be having with your hardware.
If your hardware came with an installation CD, it is recommended that you click Cancel to close this wizard and use the manufacturer's CD to install this hardware.
To continue, click Next.
< Back
Next >
Cancel

c. Select “Yes” then click “Next”.

Add Hardware Wizard
Is the hardware connected?
Have you already connected this hardware to your computer?
Yes, I have already connected the hardware
No, I have not added the hardware yet
< Back
Next >
Cancel

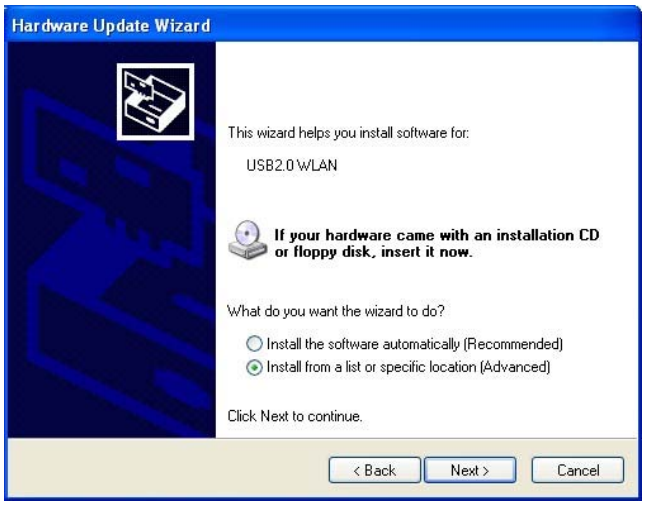
d. Select “USB2.0 WLAN” then click “Next”.


Add Hardware Wizard
The following hardware is already installed on your computer
From the list below, select an installed hardware device, then click Next to check properties or troubleshoot a problem you might be having.
To add hardware not shown in the list, click "Add a new hardware device."
Installed hardware:
USB2.0 WLAN
Universal Serial Bus (USB) Controller
Mass Storage Controller
Intel(R) 82852/82855 GM/GME Graphics Controller
Intel(R) 82852/82855 GM/GME Graphics Controller
Realtek AC'97 Audio
< Back
Next >
Cancel

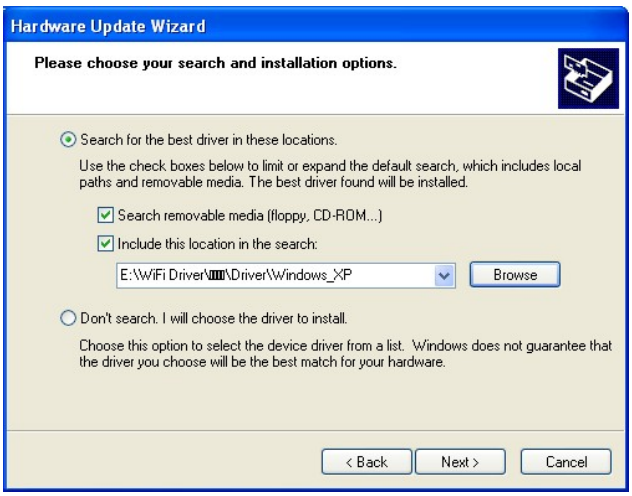
e. Click “Finish” to complete the add hardware wizard.

Add Hardware Wizard
Completing the Add Hardware Wizard
Here is the current status of the hardware you selected:
The drivers for this device are not installed. (Code 28)
To start a troubleshooter that can help you resolve any problems you might be having, click Finish.
To exit this wizard, click Cancel.
< Back
Finish
Cancel

f. Click “Install from a list or specific location [Advanced]” on the Hardware Update Wizard window.


Hardware Update Wizard
This wizard helps you install software for:
USB2.0 WLAN
If your hardware came with an installation CD or floppy disk, insert it now.
What do you want the wizard to do?
Install the software automatically (Recommended)
Install from a list or specific location (Advanced)
Click Next to continue.
< Back
Next >
Cancel

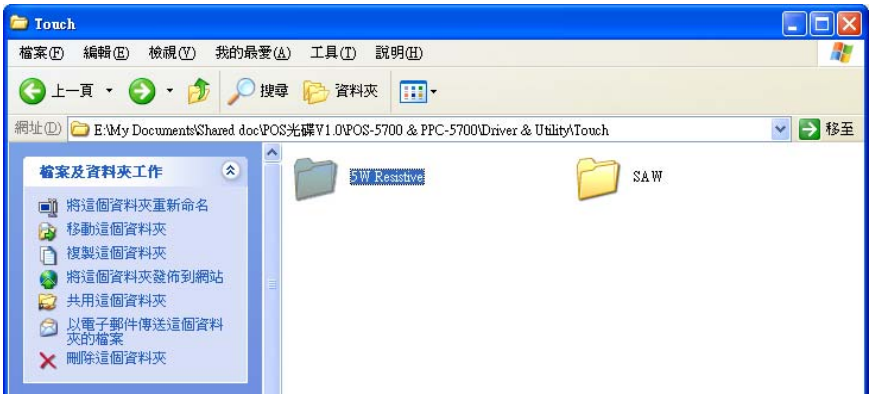
g. Select “WiFi Driver” and then specify the folder accordingly. Click “Next”

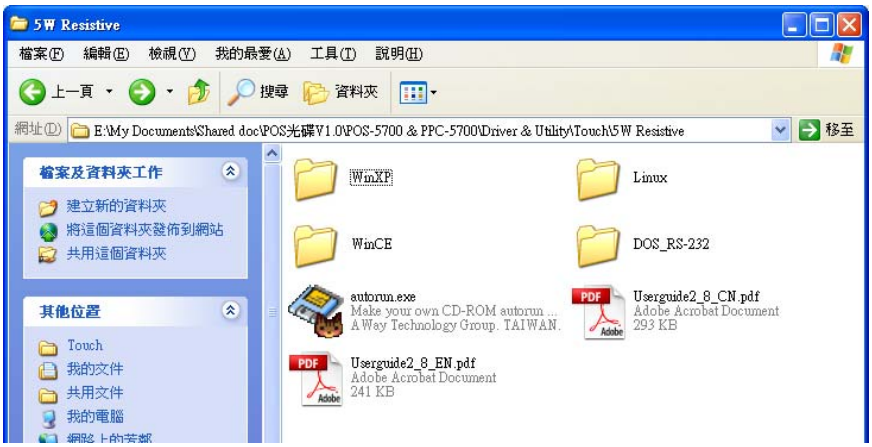

Hardware Update Wizard
Please choose your search and installation options.
Search for the best driver in these locations.
Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.
Search removable media (floppy, CD-ROM...)
Include this location in the search:
E:\WiFi Driver\[redacted]\Driver\Windows_XP
Browse
Don't search. I will choose the driver to install.
Choose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.
< Back
Next >
Cancel

h. Click “Finish” to complete the Hardware Update Wizard.

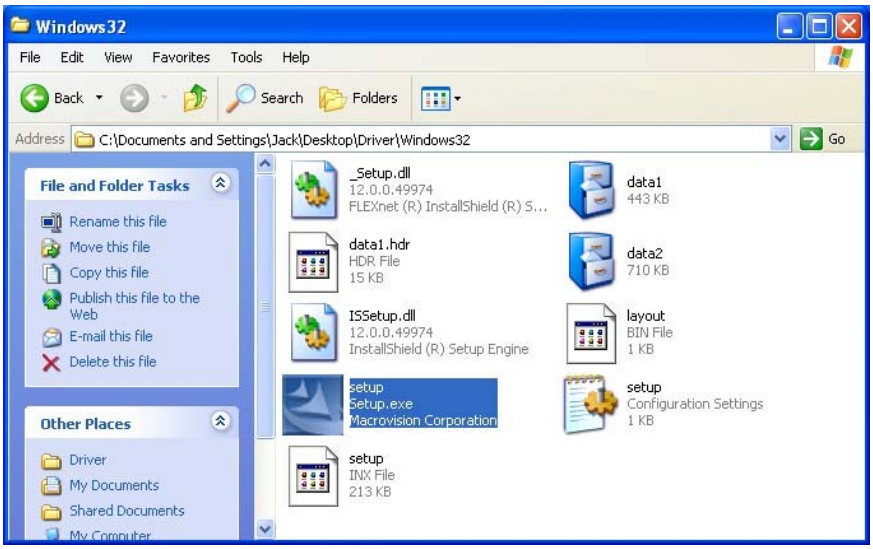
4.5 Install Touch Screen Driver

a. Double click the folder “Touch” and then double click the subfolder according to the touch type and operating system.

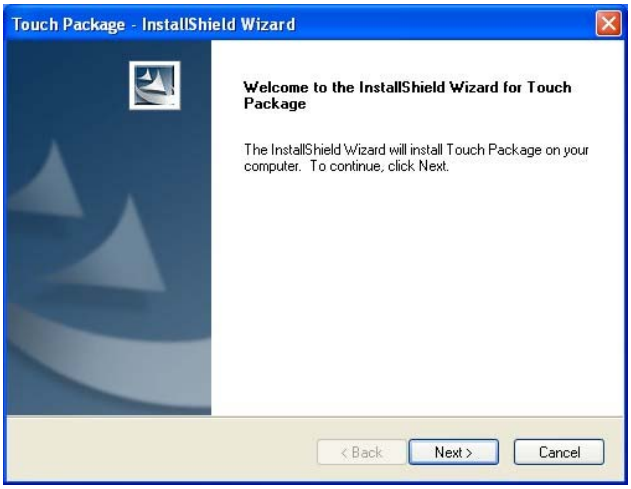




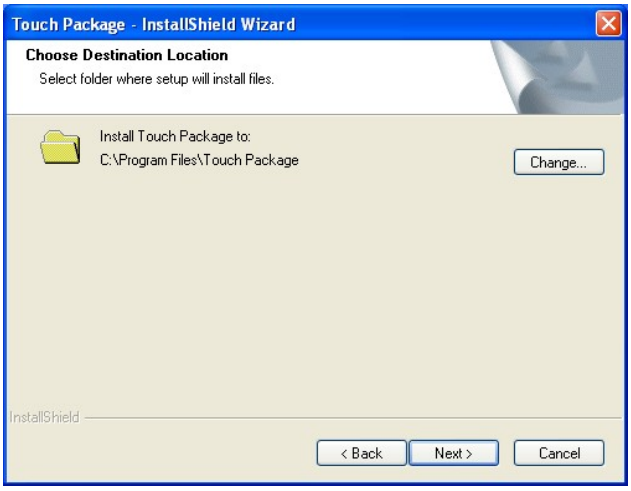
b. Double click the file “setup” to start the installation.



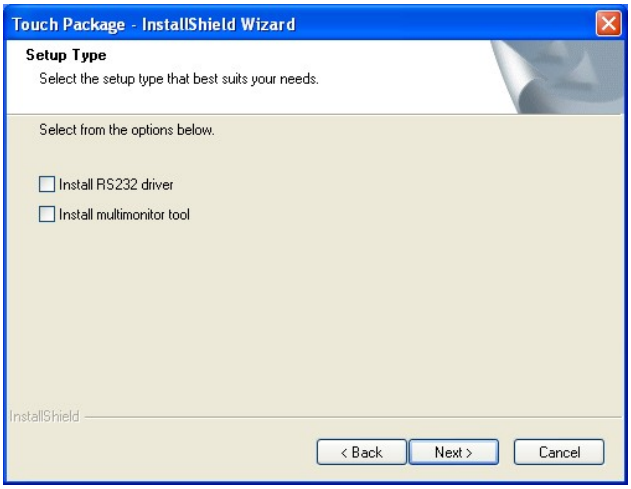
c. Click “Next” on the welcome window.


Touch Package - InstallShield Wizard
Welcome to the InstallShield Wizard for Touch Package
The InstallShield Wizard will install Touch Package on your computer. To continue, click Next.
< Back
Next >
Cancel

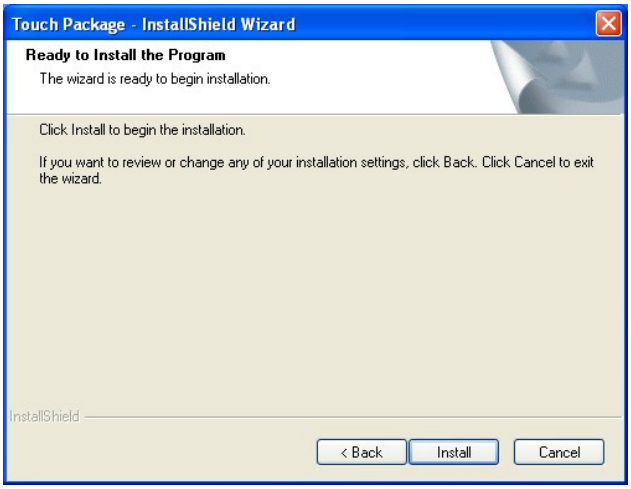
d. Select the destination folder and click “Next”.



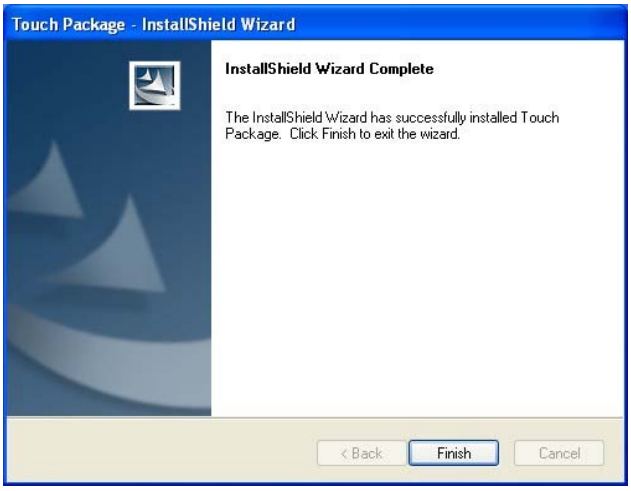
e. Click “Next”.



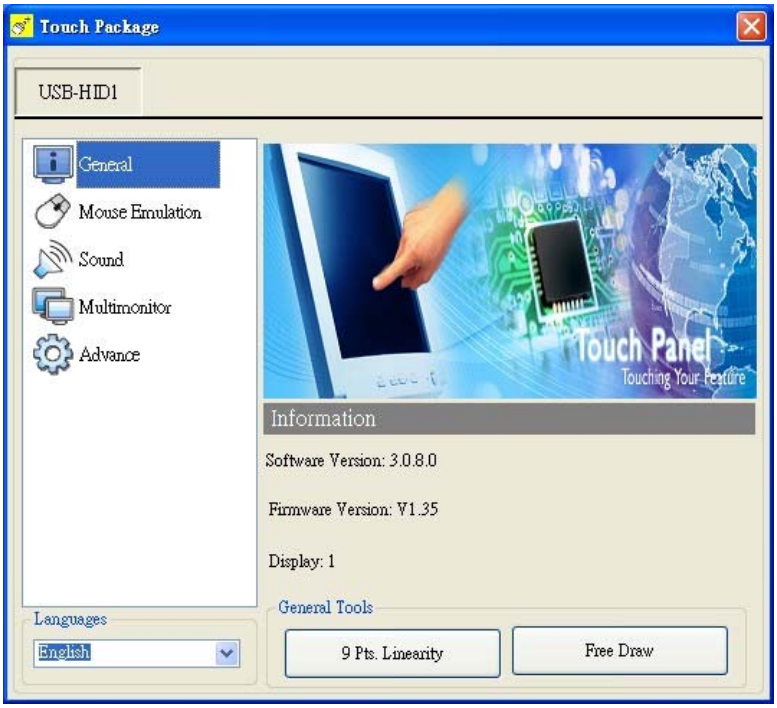
f. Click “Install” to start the installation.

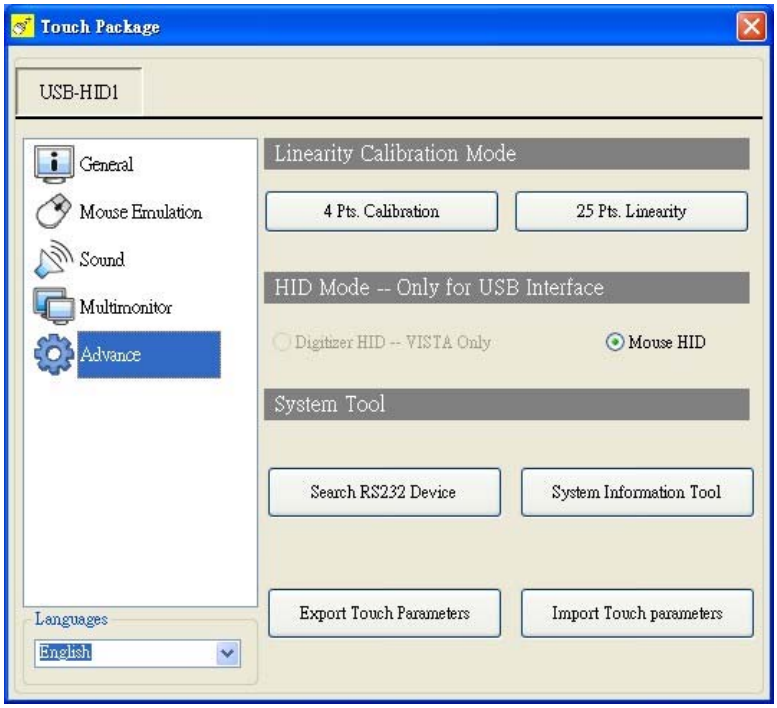

Touch Package - InstallShield Wizard
Ready to Install the Program
The wizard is ready to begin installation.
Click Install to begin the installation.
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.
InstallShield
< Back
Install
Cancel

g. Click “Finish” to exit the setup and restart the system.

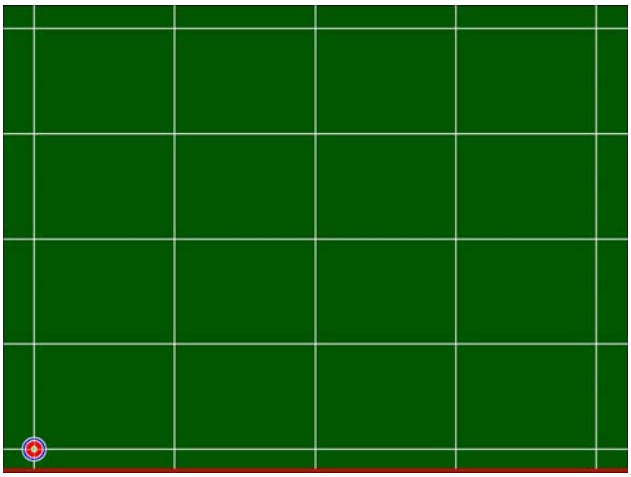

Touch Package - InstallShield Wizard
InstallShield Wizard Complete
The InstallShield Wizard has successfully installed Touch Package. Click Finish to exit the wizard.
< Back
Finish
Cancel

h. Execute All Programs >> Touch Package >> Touch Tool. Select “General” and then click “9 Pts. Linearity” to start the 9-point-calibration. Or select “Advance” to select “4 Pts. calibration” or “25 Pts. Linearity”. The more points are calibrated, the more accurate the calibration will be.

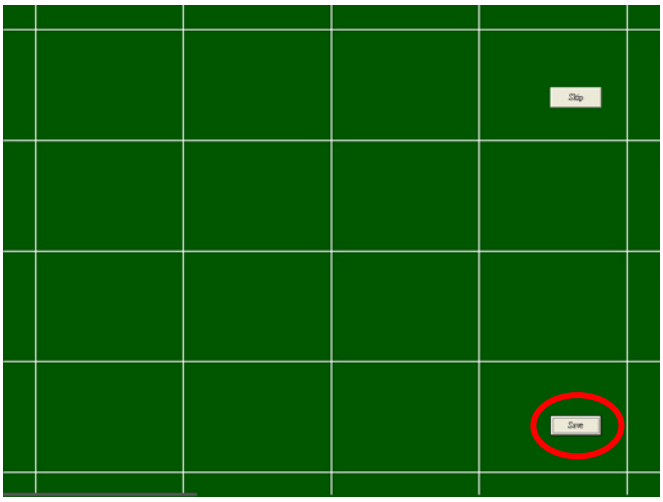




i. Touch the center of the red dot on the screen with a finger till it disappears. The dot will appear 4/9/25 times in turn on the screen.



j. After the calibration is done, press the “save” button to save.



Note

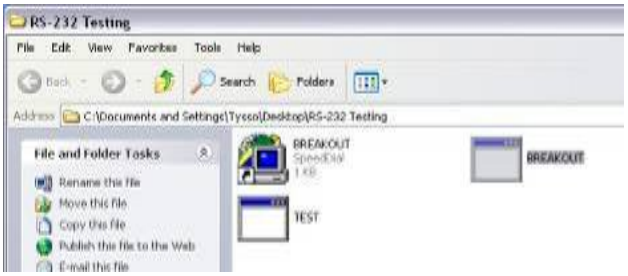
Refer to the file “Userguide2_8” for more information on the setting of the touch package.

5. Peripherals Testing

If the POSpark is equipped with magnetic stripe card reader or customer display, connected to a cash drawer, follow the steps below to test the function.

5.1 Magnetic Stripe Card Reader

a. Open the folder “Peripherals” “MSR” and double click the file “BREAKOUT.EXE”.

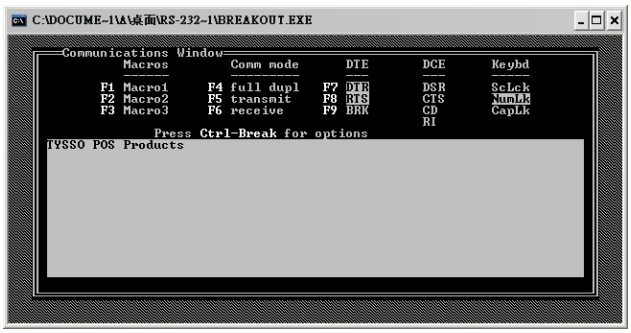


b. After the testing window pops up, slide a magnetic stripe card and its information will show on the window.

5.2 Customer Display

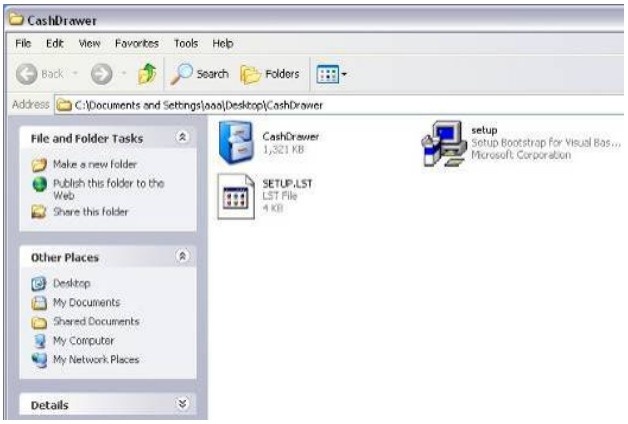
a. Open the folder “Peripherals” “Customer Display” and double click the file “BREAKOUT.”

b. Enter any keys on the window and the typed words will appear on the customer display.



5.3 Cash Drawer

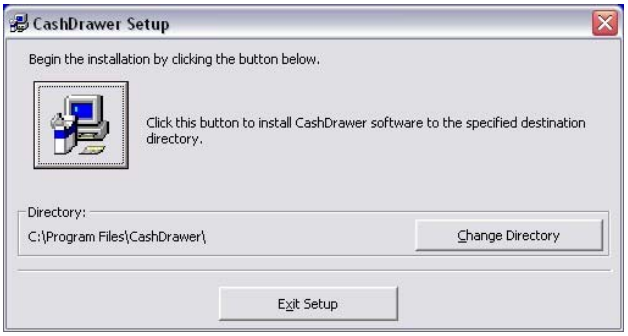
a. Open the folder “Peripherals” “Cash Drawer” and double click the file “setup.exe”



b. Click “OK” on the welcome window.

CashDrawer Setup
Welcome to the CashDrawer installation program.
Setup cannot install system files or update shared files if they are in use. Before proceeding, we recommend that you close any applications you may be running.
OK
Exit Setup

c. Select the destination folder and click the icon to start the installation.


CashDrawer Setup
Begin the installation by clicking the button below.
Click this button to install CashDrawer software to the specified destination directory.
Directory:
C:\Program Files\CashDrawer\
Change Directory
Exit Setup

d. Select an existed group name or enter a new one. Click “Continue.”

e. Click “OK” to finish the installation.

f. Execute **Start** >> **All Programs** >> **Cash Drawer** >> **CashDrawer** to open the program.

g. Click “Open Cash Drawer” on the window, and the connected cash drawer will open.

Note

The above cash drawer driver is for testing only. If editing AP Open drawer is required, please refer to the following command set.

Cash Drawer Controller Register

Register Location: I/O port 280h

Attribute: Read/Write

Size: 8 bit

Bit 0~3, 5~7: Reserved

Bit 4: Cash Drawer “DIO OUTPUT”, pin output control.

= 1: Open the Cash Drawer

= 0: Close the Cash Drawer

Control Command Example

Run “Debug.EXE” under DOS or Windows98

Command	Description
O 280 10	Open the cash drawer
O 280 00	Close the cash drawer

- Set the I/O address 280 bit 4 = 1 to open the cash drawer by “DIO OUTPUT” pin control.
- Set the I/O address 280 bit 4 = 0 to close the cash drawer.

6. Jumper Settings & Connectors

6.1 Jumper Settings

- JP3: Clear CMOS setup

	Description
1-2	Normal Operation
2-3	Clear CMOS Setup

- JP5: LCD voltage setup

	Description
1-2	3.3V
3-4	5V

- JP4: K/B use selection

	Description
2-3	K_DAT and K_DAT_A K_CLK and K_CLK_A
1-2	Use for K_DAT and K_CLK

- JP10: COM1, COM2, COM4 port RI and voltage selection

	Description
5-6, 11-12, 17-18	Use for RI
3-4, 9-10, 15-16	5V
1-2, 7-8, 13-14	12V

- JP2: LCD TYPE BIOS select jumper selection

Description	**Short**
800 x 600 x 18bit	7-8
1024 x 768 x 18bit	5-6
1280 x 1024 x 18bit	5-6, 7-8
1024 x 768 x 24bit	1-2, 7-8
1280 x 1024 x 24bit	1-2, 5-6

	Description
1-2	LID0
3-4	LID1
5-6	LID2

7-8	LID3

6.2 Connectors

- AUX1 Audio Jack-in connectors

Pin No.	Description
1	GND
2	Line-out-R
3	X
4	X
9	Line-out-L

- CN5: Audio Header Connector

Pin No.	Description
1	Line-out-L
2	X
3	X
4	Line-out-R

- CN12 ATX 4PIN Power Connectors

Pin No.	Description
1	GND
2	GND
3	12V
4	12V

- CN9: RJ-11 DIO Connectors

Pin No.	Description
1	GND
2	DIO OUTPUT
3	DIO INPUT
4	12V
5	NC
6	GND

- IDE1: Primary IDE Interface Connector => 44 pin

Pin No.	Description	Pin No.	Description
1	RESET#	2	GROUND

3	DATA 7	4	DATA 8
5	DATA 6	6	DATA 9
7	DATA 5	8	DATA 10
9	DATA 4	10	DATA 11
11	DATA 3	12	DATA 12
13	DATA 2	14	DATA 13
15	DATA 1	16	DATA 14
17	DATA 0	18	DATA 15
19	GROUND	20	N/C
21	IDE DRQ	22	GROUND
23	IOW#	24	GROUND
25	IOR#	26	GROUND
27	IDE CHRDY	28	GROUND
29	IDE DACK	30	GROUND
31	INTERRUPT	32	N/C
33	PA1	34	66DET
35	PA0	36	PA2
37	HDC CS1#	38	HDC CS3#
39	HDD ACTIVE#	40	GROUND
41	VCC	42	VCC
43	GROUND	44	N/C

- SATA1

Pin No.	Description
1	GND
2	TX+
3	TX-
4	GND
5	RX-
6	RX+
7	GND

- SATA2

Pin No.	Description
1	GND
2	TX+
3	TX-
4	GND

5	RX-
6	RX+
7	GND

- CF1: Compact Flash Connector

Pin No.	Description	Pin No.	Description
1	GROUND	26	VCC-IN CHECK1
2	DATA 3	27	DATA 11
3	DATA 4	28	DATA 12
4	DATA 5	29	DATA 13
5	DATA 6	30	DATA 14
6	DATA 7	31	DATA 15
7	HDC_CS1#	32	HDC_CS3#
8	N/C	33	N/C
9	GROUND	34	IOR#
10	N/C	35	IOW#
11	N/C	36	VCC_COM
12	N/C	37	IRQ15
13	VCC_COM	38	VCC_COM
14	N/C	39	CSEL
15	N/C	40	N/C
16	N/C	41	HDD_RESET
17	N/C	42	IORDY
18	SA2	43	SDREQ
19	SA1	44	SDACK#
20	SA0	45	HDD_ACTIVE#
21	DATA 0	46	NC
22	DATA 1	47	DATA 8
23	DATA 2	48	DATA 9
24	N/C	49	DATA 10
25	VCC-IN CHECK2	50	GROUND

- COM1: Serial Port Connector

Pin No.	Description
1	DCD1
2	RX1
3	TX1

4	DTR1
5	GND
6	DSR1
7	RTS1
8	CTS1
9	RI1

- COM2: Serial Port Connector

Pin No.	Description
1	DCD2
2	RX2
3	TX2
4	DTR2
5	GND
6	DSR2
7	RTS2
8	CTS2
9	RI2

- COM4: Serial Port Connector

Pin No.	Description	Pin No.	Description
1	DCD4	2	DSR4
3	RX4	4	RTS4
5	TX4	6	CTS4
7	DTR4	8	RI4
9	GND	10	NC

- COM5: Serial Port Connector

Pin No.	Description	Pin No.	Description
1	DCD5	2	DSR5
3	RX5	4	RTS5
5	TX5	6	CTS5
7	DTR5	8	RI5
9	GND	10	NC

- KB1: KB Jack Connector

Pin No.	Description
1	KDATA_A
2	NC
3	GND
4	VCC5
5	K_CLK_A
6	NC

- PS2: Mouse Jack Connector

Pin No.	Description
1	MDATA
2	NC
3	GND
4	VCC5
5	MCLK
6	NC

- CN15: USB CN3 & KB1 & PS2 Connector Co-lay

Pin No.	Description	Pin No.	Description
1	USB_POWER	2	GND
3	D0F-	4	D1F+
5	D0F+	6	D1F-
7	GND	8	USB_POWER
9	K_POWER	10	MDATA
11	KDATA_A	12	MCLK
13	K_CLK_A	14	GND

- CN6: KB Pin Header Connector

Pin No.	Description	Pin No.	Description
1	GND	2	K_DAT
3	KDATA_A	4	K_CLK
5	K_CLK_A	6	VCC5
7	KB_EN	8	GND

- CN13: KB Pin Header Connector

Pin No.	Description	Pin No.	Description
1	VCC5	2	GND
3	KDATA_A	4	K_CLK_A
5	K_DAT	6	K_CLK
7	COM3_TX	8	COM3_RX
9	KB_EN	10	GND

- CN3A: USB Connector

Pin No.	Description
1	USBVCC1
2	D0F-
3	D0F+
4	USBGND1

- CN3B: USB Connector

Pin No.	Description
1	USBVCC1
2	D1F-
3	D1F+
4	USBGND1

- CN4A: USB Connector

Pin No.	Description
1	USBVCC2
2	D2F-
3	D2F+
4	USBGND2

- CN4B: USB Connector

Pin No.	Description
1	USBVCC2
2	D3F-
3	D3F+
4	USBGND2

- USB1: USB Connector

Pin No.	Description	Pin No.	Description
1	NC	2	NC
3	GND	4	NC
5	D4F+	6	NC
7	D4F-	8	GND
9	USBVCC3	10	NC

- USB2: USB Connector

Pin No.	Description	Pin No.	Description
1	NC	2	NC
3	GND	4	NC
5	D5F+	6	NC
7	D5F-	8	GND
9	USBVCC3	10	NC

- LAN1: 100M-LAN RJ45 Connector

Pin No.	Description	Pin No.	Description
1	X0+	2	X0-
3	X1+	4	X1-
5	V_DAC	6	V_DAC
7	X2+	8	X2-
9	X3+	10	X3-
11	LINK100-	12	LINK100+
13	ACT-	14	ACT+

- VGA1: 16-pin CRT Connector

Pin No.	Description	Pin No.	Description
1	RED	2	DDCDAT
3	GREEN	4	DDCCLK,
5	BLUE	6	GND
7	HSYNC	8	GND
9	VSYNC	10	GND
11	GND	12	GND
13	GND	14	GND
15	GND	16	GND

- VGA_POWER1: DC Power Jack

Pin No.	Description
1	GND
2	GND
3	12V

- CN8: Inverter & Power Button Connector

Pin No.	Description
1	VCC12
2	VCC12
3	GND
4	LCD_EABLE
5	LCD_BKLTEN
6	Power Button-

- CN1: Inverter Connector

Pin No.	Description
1	VCC12
2	GND
3	LCD_EABLE
4	LCD_BKLTEN
5	GND

- LVDS1: LCD LVDS Interface Connector

Pin No.	Description	Pin No.	Description
1	VCC_LCD	2	VCC_LCD
3	VCC_LCD	4	VCC_LCD
5	GND	6	GND
7	GND	8	GND
9	LVDSA0+	10	LVDSB0+
11	LVDSA0-	12	LVDSB0-
13	GND	14	GND
15	LVDSA1+	16	LVDSB1+
17	LVDSA1-	18	LVDSB1-
19	GND	20	GND

21	LVDSA2+	22	LVDSB2+
23	LVDSA2-	24	LVDSB2-
25	GND	26	GND
27	LVDSACLK+	28	LVDSBCLK+
29	LVDSACLK-	30	LVDSBCLK-
31	GND	32	GND
33	LVDSA3+	34	LVDSB3+
35	LVDSA3-	36	LVDSB3-
37	GND	38	GND
39	NC	41	NC

- FAN1: Fan Connector

Pin No.	Description
1	Fan Speed Detect
2	+12V
3	GND

- FAN2: Fan Connector

Pin No.	Description
1	Fan Speed Detect
2	+12V
3	GND

- FAN3: Fan Connector

Pin No.	Description
1	NC
2	+12V
3	GND

- CN10: LED Connector

Pin No.	Description	Pin No.	Description
1	Power LED-	2	Power LED+
3	HDD LED-	4	HDD LED+

- CN14: Power Button

Pin No.	Description
1	Power Button-
2	GND

- CN11: Reset Button

Pin No.	Description
1	RESET
2	GND

- DIMM1: DDR SODIMM SOCKET